

REMARKS

In response to the non-final Official Action of September 12, 2008, claims 1, 2, 4-16, 18, and 20-28 have been amended, claims 3 and 19 have been canceled, and claims 29-38 are newly presented. As a result, claims 1, 2, 4-16, 18, 20-38 are pending in the present application. No new matter has been added.

More particularly, in claim 1, the preamble has been shortened, and the feature that the second connection is a so far not requested second connection has been added. This feature is found in the original application as filed, for instance, it is derivable from the specification at page 10, third paragraph and the description of the embodiments of figures 1, 3, and 6. For instance, in the embodiment of Figure 1, the actions of checking (under consideration of a first (packet-switched) connection and a second (circuit-switched) connection) 110 and 113 and the action of controlling (of the first connection) 114 are performed although no second (circuit-switched) connection is requested in the embodiment at all (see specification, page 25, second paragraph and page 26, second paragraph). This is also the case in the embodiments of Figures 3 and 6. The last feature of claim 1 has been adapted accordingly.

Claim 3 has been canceled.

Claim 10 has been clarified based on the disclosure of page 14, fourth paragraph.

Claim 17 has been amended to recite a computer-readable medium.

Independent system claim 18 has been canceled.

Independent device claim 20 has been transformed into an independent apparatus claim that avoids means-plus-function language. The further amendments correspond to the amendments in claim 1.

Independent mobile station claim 21 has been transformed into a dependent apparatus claim.

Dependent mobile station claims 22-27 have been transformed into apparatus claims and have been adapted to the wording in independent apparatus claim 20. Therein, the amendments in claim 24 correspond to the amendments in claim 10.

Independent network element claim 28 has been transformed into a dependent apparatus claim.

New independent apparatus claim 29 is written in means-plus-function language, corresponding to the features of claim 1.

A set of new dependent apparatus claims 30-36, corresponding to the feature of dependent method claims 2, 4-7 and 12-13, has been added.

New dependent apparatus and method claims 37 and 38 have been added directed to the feature that the first and second connections are provided by the same bearer, which is for instance disclosed in claims 15 and 16.

In all claims, reference numerals have been deleted.

Subject Matter of the Invention

The present invention relates to controlling the use of transmission resources. It is checked whether quality of service (QoS) requirements of a first connection can still be guaranteed when transmission resources for a transmission between a first entity and a second entity are jointly used by the first connection and a so far not requested second connection. The use of at least one portion of the transmission resources by the first connection is then controlled accordingly.

By checking if joint usage of the transmission resources by a first connection and a so far not requested second connection is possible while still guaranteeing the QoS requests of the first connection, exemplary embodiments of the present invention as expressed by the amended independent claims ensure that, when the second connection, which may for instance be a connection with a higher priority, is later established, the QoS of the first connection is not deteriorated, as is usually the case in prior art systems.

Exemplary embodiments of the present invention as expressed by the amended independent claims are described in the application with respect to Figures 1, 3, and 6.

Prior Art

Naghian (WO 2000/49824)

Naghian discloses a method for admission control in a cellular telecommunication system. Bearer requests resulting in the load being under a first predetermined limit are admitted. If a bearer request would result in the load being over the first predetermined limit, the admission control entity tries to make room for the bearer request, i.e., release resources without degrading the quality of service (QoS) provided for the existing bearers (see Naghian, Abstract). For this purpose, an admission control entity calculates a result load estimate based on the current load and the bearer request, wherein the resulting load estimate comprises the transmission, i.e., interference powers of both existing bearer and the new bearers (see Naghian, page 6, lines 12-15).

Kim et al (6,771,648)

Kim relates to a switch for a network. The switch includes an input port mechanism which receives traffic of connections from the network. Each connection has a priority. The switch includes an output port mechanism which sends traffic of connections to the network. The switch includes a controller which serves connections and which monitors the connections received by the input port mechanism and sent by the output port mechanism and releases connections according to a connection's priority when a predetermined condition exists in the switch. The controller is connected to the input port mechanism and the output port mechanism. Each connection requests a specific bandwidth from the controller. A method for switching connections. The method includes the steps of monitoring traffic of connections received by a switch. Then there is the step of releasing connections from the switch according to the connection's priority when a predetermined condition in the switch exists (Kim, Abstract).

Casati et al (7,301,934)

Casati relates to a telecommunication system including a mobile station, and means for a mobile station to receive voice-over Internet Protocol (VoIP) calls when it is roaming away from a home network, comprising: means for informing a serving GGSN of the International Mobile Subscriber Identity (IMSI) of the called mobile station, and means for enabling a local VoIP control server to map a called MSISDN number to the IMSI number (Casati, Abstract).

Baj (7,130,273)

Baj relates to a system for testing a software client or hardware module in a voice-over-IP (VoIP) network path includes a VoIP client, a test tool, and an analyzer. The VoIP client, connected to the VoIP network, makes a series of calls to a destination. The calls activate the software client or hardware module under test. The test tool, which has access to the network, plays a series of audio files over the VoIP during the calls. The test tool also polls the software client or hardware module over the network for status information after the calls are completed. While the audio files are being played, the analyzer records the audio files at the destination for measurement the quality of the calls. Accordingly, the quality of voice connection on the VoIP network can be measured, and specific components on the network can be tested (Baj, Abstract).

Claim Rejections - 35 USC §102

At section 2, claims 1, 3-9, 11-13, 18-23 and 28 are rejected under 35 USC §102(b) as anticipated in view of Naghian. With respect to independent claim 1, the Office asserts that Naghian discloses a method for controlling the use of transmission resources, wherein transmission resources for a transmission between a first entity and a second entity can be used by at least a first connection and a second connection and comprising the specific actions recited in claim 1, with specific reference to page 6, lines 12-19 and 29-34 of Naghian.

Novelty and Inventiveness of the Amended Independent Claims

The amended independent claims (claims 1 and 20 and new claim 29) contain the feature that it is checked if quality of service requirements of a first connection can still be guaranteed when transmission resources for a transmission between a first entity and a second entity are jointly used by said first connection and a so far not requested second connection.

This feature contains two important sub-features that are not disclosed in Naghian at all.

First, it is required that transmission resources for a transmission between a first entity and a second entity can be jointly used by a first connection and a second connection. It is apparent to a person skilled in the art that, for a transmission between the first and second entity, both the first and the second connection have to be provided by the same bearer. It is apparent that amended claim 1 thus targets scenarios such as the Dual Transfer Mode (DTM), where for instance simultaneous circuit-switched and packet-switched connections are provided by a single 2G or 3G bearer. The transmission resources according to claim 1 are thus those of a single bearer, and claim 1 is thus directed to controlling the use of these single-bearer transmission resources by a first and a second connection that are provided by said bearer.

In contrast, the admission control method described in Naghian only pertains to controlling the use of transmission resources of several bearers (see Naghian, page 6, lines 6-15). It is not envisaged that these bearers have more than one connection, and it is in particular not envisaged that a refined control of the use of transmission resources of a single bearer by two or more connections is performed.

Second, the above-cited feature of the amended independent claims requires that a check is performed if joint usage of the transmission resources by a first connection and a so far not requested second connection is performed. Thus, when performing the checking, a first connection may already have been requested or even established, but the second connection has not even been requested so far. The checking thus takes into

account a second connection that will either be requested in the future, or will not be requested at all.

Such an approach is not disclosed in Naghian at all. Naghian only considers scenarios where one or more bearers (so-called existing bearers) have already been established, and a request for one or more further bearers occurs. Only in response to such a request for one or more further bearers, is it checked if the load estimate is higher than the predetermined limit, and in response to this decision, is it decided if the bearer requests can be granted or if the procedures for handling critical load and overload situations have to be performed (see Naghian, page 6, lines 6-31). A potential future bearer request is however not considered in these procedures at all.

The amended independent claims are thus novel with respect to Naghian, and also with respect to the further cited prior art documents. It is also submitted that Naghian does not suggest the features of the amended independent claims.

Since independent claims 1 and 20 have been amended in a manner which is not anticipated by Naghian, it is respectfully submitted that dependent claims 4-9, 11-13, 18, 21-23, and 28 are also not anticipated by Naghian at least in view of their dependency from these independent claims. Please note that claims 3 and 19 have been canceled.

Furthermore, newly submitted independent claim 29 is also believed to be not anticipated by Naghian since it corresponds to independent claim 20, but written using means plus function terminology.

Claim Rejections - 35 USC §103

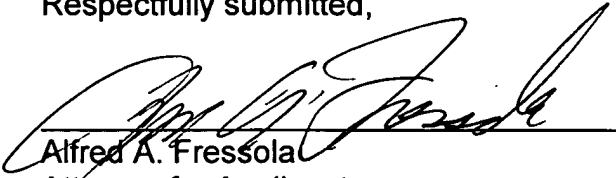
At sections 5-9, dependent claims 2, 10, 14-17, and 24-25 are rejected under 35 USC §103(a) as unpatentable over Naghian further in view of additional art. Each of these dependent claims ultimately depends from an independent claim which is believed to be allowable and therefore each of these dependent claims is further believed to be allowable at least in view of such dependency.

Furthermore, newly submitted dependent claims 30-38 all ultimately depend from amended independent claims 1 or 20 and therefore each of these dependent claims is also believed to be allowable at least in view of such dependency.

In view of the foregoing, it is respectfully submitted that the present application as amended is in condition for allowance and such action is earnestly solicited.

Respectfully submitted,

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